

PLOT SCALE - 1"=500'

PLOTTED FROM - TRAB17882

STATE OF SOUTH DAKOTA  
DEPARTMENT OF TRANSPORTATION  
PLANS FOR PROPOSED

PROJECT 014-191  
U.S. HIGHWAY 14  
KINGSBURY COUNTY

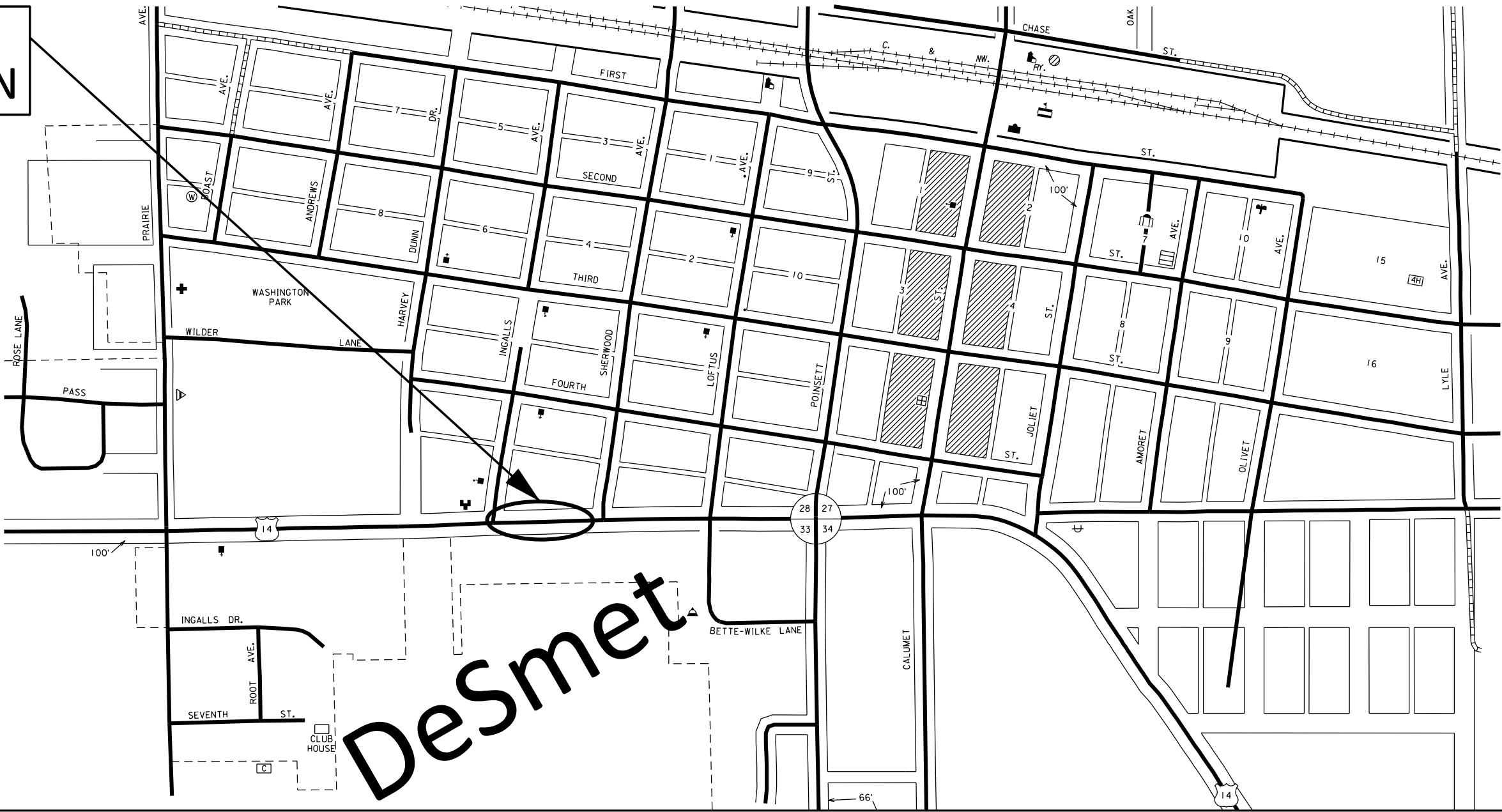
JUNCTION BOX INSTALLATION AND STORM SEWER CLEANING  
PCN i52f

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	014-191	1	12
Plotting Date: 03/07/2019			

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Sheet 12 Cross Section

PROJECT  
LOCATION



DESIGN DESIGNATION

ADT (2018)	2529
ADT (2038)	2939
DHV	473
D	50%
T DHV	5.7%
T ADT	12.6%
V	30 M.P.H.

STORM WATER PERMIT  
NONE REQUIRED

Desmet

PLOT NAME - 1

FILE - ...\\152f TITLE SHEET.DGN

# ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	014-191	2	12

## ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
230E0100	Remove and Replace Topsoil	Lump Sum	LS
450E8900	Cleanout Pipe Culvert	4	Each
462E0100	Class M6 Concrete	7.6	CuYd
480E0100	Reinforcing Steel	1,550	Lb
634E0010	Flagging	5.0	Hour
634E0110	Traffic Control Signs	137.0	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
634E0275	Type 3 Barricade	2	Each
671E6007	Type A7 Manhole Frame and Lid	1	Each
734E0010	Erosion Control	Lump Sum	LS
734E0845	Sediment Control at Inlet with Frame and Grate	1	Each

## SPECIFICATIONS

Standard Specifications for Roads and Bridges, 2015 Edition and Required Provisions, Supplemental Specifications, and Special Provisions as included in the Proposal.

## ENVIRONMENTAL COMMITMENTS

The SDDOT is committed to protecting the environment and uses Section A Environmental Commitments as a communication tool for the Engineer and Contractor to ensure that attention is given to avoid, minimize, and/or mitigate an environmental impact. Environmental commitments to various agencies and the public have been made to secure approval of this project. An agency with permitting authority can delay a project if identified environmental impacts have not been adequately addressed. Unless otherwise designated, the Contractor’s primary contact regarding matters associated with these commitments will be the Project Engineer. These environmental commitments are not subject to change without prior written approval from the SDDOT Environmental Office.

Additional guidance on SDDOT’s Environmental Commitments can be accessed through the Environmental Procedures Manual found at: <http://www.sddot.com/resources/Manuals/EnvironProcManual.pdf>

For questions regarding change orders in the field that may have an effect on an Environmental Commitment, the Project Engineer will contact the Environmental Office at 605-773-3098 or 605-773-4336 to determine whether an environmental analysis and/or resource agency coordination is necessary.

## COMMITMENT B: FEDERALLY THREATENED, ENDANGERED, AND PROTECTED SPECIES

### COMMITMENT B2: WHOOPING CRANE

The Whooping Crane is a spring and fall migratory bird in South Dakota that is about 5 feet tall and typically stops on wetlands, rivers, and agricultural lands along their migration route. An adult Whooping Crane is white with a red crown and a long, dark, pointed bill. Immature Whooping Cranes are cinnamon brown. While in flight, their long necks are kept straight and their long dark legs trail behind. Adult Whooping Cranes' black wing tips are visible during flight.

#### Action Taken/Required:

Harassment or other measures to cause the Whooping Crane to leave the site is a violation of the Endangered Species Act. If a Whooping Crane is sighted roosting in the vicinity of the project, borrow pits, or staging areas associated with the project, cease construction activities in the affected area until the Whooping Crane departs and immediately contact the Project Engineer. The Project Engineer will contact the Environmental Office so that the sighting can be reported to USFWS.

## COMMITMENT C: WATER SOURCE

The Contractor will not withdraw water with equipment previously used outside the State of South Dakota or previously used in aquatic invasive species waters within South Dakota without prior approval from the SDDOT Environmental Office. Thoroughly wash all construction equipment to prevent and control the introduction and spread of invasive species into the project vicinity.

#### Action Taken/Required:

The Contractor will obtain the necessary permits from the regulatory agencies such as the South Dakota Department of Environment and Natural Resources (DENR) and the United States Army Corps of Engineers (USACE) prior to water extraction activities.

Additional information and mapping of Aquatic Invasive Species in South Dakota can be accessed at: <http://sdleastwanted.com/maps/default.aspx>.

## COMMITMENT E: STORM WATER

Construction activities constitute less than 1 acre of disturbance.

#### Action Taken/Required:

At a minimum and regardless of project size, appropriate erosion and sediment control measures must be installed to control the discharge of pollutants from the construction site.

## COMMITMENT H: WASTE DISPOSAL SITE

The Contractor will furnish a site(s) for the disposal of construction and/or demolition debris generated by this project.

#### Action Taken/Required:

Construction and/or demolition debris may not be disposed of within the Public ROW.

The waste disposal site(s) will be managed and reclaimed in accordance with the following from the General Permit for Construction/Demolition Debris Disposal Under the South Dakota Waste Management Program issued by the Department of Environment and Natural Resources.

The waste disposal site(s) will not be located in a wetland, within 200 feet of surface water, or in an area that adversely affects wildlife, recreation, aesthetic value of an area, or any threatened or endangered species, as approved by the Environmental Office and the Project Engineer.

If the waste disposal site(s) is located such that it is within view of any ROW, the following additional requirements will apply:

1. Construction and/or demolition debris consisting of concrete, asphalt concrete, or other similar materials will be buried in a trench completely separate from wood debris. The final cover over the construction and/or demolition debris will consist of a minimum of 1 foot of soil capable of supporting vegetation. Waste disposal sites provided outside of the Public ROW will be seeded in accordance with Natural Resources Conservation Service recommendations. The seeding recommendations may be obtained through the appropriate County NRCS Office. The Contractor will control the access to waste disposal sites not within the Public ROW with fences, gates, and placement of a sign or signs at the entrance to the site stating “No Dumping Allowed”.

2. Concrete and asphalt concrete debris may be stockpiled within view of the ROW for a period of time not to exceed the duration of the project. Prior to project completion, the waste shall be removed from view of the ROW or buried and the waste disposal site reclaimed as noted above.

The above requirements will not apply to waste disposal sites that are covered by an individual solid waste permit as specified in SDCL 34A-6-58, SDCL 34A-6-1.13, and ARSD 74:27:10:06.

Failure to comply with the requirements stated above may result in civil penalties in accordance with South Dakota Solid Waste Law, SDCL 34A-6-1.31.

All costs associated with furnishing waste disposal site(s), disposing of waste, maintaining control of access (fence, gates, and signs), and reclamation of the waste disposal site(s) will be incidental to the various contract items.

**COMMITMENT I: HISTORICAL PRESERVATION OFFICE CLEARANCES**

State Historical Preservation Office (SHPO or THPO) concurrence has not been obtained for this project.

**Action Taken/Required:**

All earth disturbing activities require a cultural resource review prior to scheduling the pre-construction meeting. This work includes, but is not limited to: Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas.

The Contractor will arrange and pay for a record search and when necessary, a cultural resource survey. The Contractor has the option to contact the state Archaeological Research Center (ARC) at 605-394-1936 or another qualified archaeologist, to obtain either a records search or a cultural resources survey. A record search might be sufficient for review if the site was previously surveyed; however, a cultural resources survey may need to be conducted by a qualified archaeologist.

The Contractor will provide ARC with the following: a topographical map or aerial view of which the site is clearly outlined, site dimensions, project number, and PCN. If applicable, provide evidence that the site has been previously disturbed by farming, mining, or construction activities with a landowner statement that artifacts have not been found on the site.

The Contractor will submit the cultural resources survey report to SDDOT Environmental Office, 700 East Broadway Avenue, Pierre, SD 57501-2586. SDDOT will submit the information to the appropriate SHPO/THPO. Allow **30 Days** from the date this information is submitted to the Environmental Engineer for SHPO/THPO review.

In the event of an inadvertent discovery of human remains, funerary objects, or if evidence of cultural resources is identified during project construction activities, then such activities will immediately cease and the Project Engineer will be immediately notified. The Project Engineer will contact the SDDOT Environmental Office to determine an appropriate course of action.

The Contractor is responsible for obtaining any additional permits and clearances for Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas that affect wetlands, threatened and endangered species, or waterways. The Contractor will not utilize a site known or suspected of having contaminated soil or water. The Contractor will provide the required permits and clearances to the Project Engineer at the preconstruction meeting.

SEQUENCE OF OPERATIONS

The Contractor will submit a sequence of operations for approval two weeks prior to the preconstruction meeting.

UTILITIES

Utilities are not planned to be affected on this project. If utilities are identified near the improvement area through the SD One Call Process as required by South Dakota Codified Law 49-7A and Administrative Rule Article 20:25, the Contractor shall contact the Project Engineer to determine modifications that will be necessary to avoid utility impacts.

GENERAL TRAFFIC CONTROL

A Type 3 Barricade will be installed facing traffic any time there is equipment or material being stored on the shoulder of the roadway.

Orange snow fence, or other Engineer approved devices, shall be placed around any open excavation area.

Existing guide, route, informational logo, regulatory, and warning signs will be temporarily reset and maintained during construction. Removing, relocating, covering, salvaging, and resetting of existing traffic control devices, including delineation, will be the responsibility of the Contractor. Cost for this work will be incidental to the contract unit prices for the various items unless otherwise specified in the plans. Any delineators and signs damaged or lost will be replaced by the Contractor at no cost to the State.

All temporary traffic control sign locations will be set in the field by the Contractor and verified by the Engineer prior to installation.

Portable sign supports will not be located on sidewalks, bicycle facilities, or other areas designated for pedestrian or bicycle traffic.

All construction operations will be conducted in the general direction of traffic movement.

If there is a discrepancy between the traffic control plans, standard plates, and the MUTCD, whichever is more stringent will be used, as determined by the Engineer.

Unless otherwise stated in these plans, work will not be allowed during hours of darkness.

Traffic Control Signs, as shown in the Estimate of Quantities, are estimates. Contractor's operation may require adjustments in quantities, either more or less. Payment will be for those signs actually ordered by the Engineer and used.

Fixed location signing placed more than 4 calendar days prior to the start of construction will be covered or laid down until the time of construction. The covers must be approved by the Engineer prior to installation. The cost of materials, labor, and equipment necessary to complete this work will be incidental to other contract items. No separate payment will be made.

All fixed location signs, sign posts, and breakaway bases will be removed within 7 calendar days following pavement marking.

SHEETING FOR TRAFFIC CONTROL SIGNS

All fluorescent orange background material on traffic control signs, all temporary delineators, and all temporary STOP (R1-1), YIELD (R1-2), DO NOT ENTER (R5-1), and WRONG WAY (R5-1a) signs will conform to the requirements of ASTM D4956 Type IX or XI. All other traffic control signs and background colors will conform to the requirements of ASTM D4956 Type IV.

SPECIAL 8'X5' JUNCTION BOX

The special junction box shall be installed over and connected to an existing 36" RCPA.

All costs to cut the existing RCPA to allow installation of the special junction box shall be incidental to the various junction box contract items.

Backfill shall be compacted to the satisfaction of the Engineer.

All work shall take place within the existing ROW.

REMOVE AND REPLACE TOPSOIL

Topsoil will also be salvaged and stockpiled prior to constructing. Limits of this work, depth of salvage, and stockpile location will be directed by the Engineer. Following completion of construction, topsoil will be spread evenly over the disturbed areas.

All costs associated with removing and replacing the topsoil along areas to be resurfaced will be incidental to the contract lump sum price for REMOVE AND REPLACE TOPSOIL.

STORM SEWER CLEANING

The storm sewer system shall be cleaned of sediment and debris at the following locations:

- 1. Between drop inlets from Sta 306+63 – 24'Rt to 308+65 - 24'Rt (24"),
- 2. Between drop inlets from Sta 308+65 – 24'Lt to 308+65 – 24'Rt (18"),
- 3. Between drop inlets from Sta 308+20 – 24'Lt to 308+65 – 24'Lt (18"),
- 4. From drop inlet to outlet Sta 308+65 – 24' Rt to 308+65 – 162'Rt (36")

Each of the aforementioned 4 segments will be measured and paid for separately.

Material in all existing pipe culverts shall be cleaned out by water flushing or other approved methods.

Material removed from the pipe culverts shall become the property of the Contractor for disposal.

The Contractor shall implement appropriate sediment control measures prior to water flushing in order to prevent discharges from the project boundaries to comply with the Storm Water Permit.

All costs to clean pipes and dispose of removed materials shall be incidental to the contract unit price per each for CLEANOUT PIPE CULVERT.

SEDIMENT CONTROL AT INLETS WITH FRAMES AND GRATES

This type of sediment control device should be used where there is pavement in the vicinity of the drop inlets and storm water or sediment could possibly enter the frame and grate. Sediment Control at Inlet with Frame and Grate will be installed prior to working in the vicinity of the drop inlets.

The Contractor will be responsible for maintaining and repairing the sediment control device for the duration of the project for which sediment control measures are required. Maintenance will be scheduled to prevent storm water from backing up into the driving lane.

"Sediment Control at Inlet with Frame and Grate" will be paid for one time at each location, regardless of the number of times the sediment control devices are installed, inspected, cleaned, removed, repaired, or replaced. All costs associated with furnishing, installing, inspecting, maintaining, cleaning, sediment removal, and repairing Sediment Control at Inlet with Frame and Grate will be incidental to the contract unit price per each for SEDIMENT CONTROL AT INLET WITH FRAME AND GRATE.

Sediment collection device will be:

A commercial made sediment collection device from the "Sediment Control at Inlet with Frame and Grate" list or an approved equal. The device will be installed in reinforced concrete drop inlets in accordance with the manufacturer's recommendations.

Sediment Control at Inlet with Frame and Grate Approved List:

Product	Manufacturer
InfraSafe Debris Collection Device with filter sock	Royal Environmental Systems, Inc. Stacy, MN Phone: 1-800-817-3240 <a href="http://www.royalenterprises.net">www.royalenterprises.net</a>
Dandy Curb Sack and Dandy Curb Bag for curb inlets. Dandy Bag, Dandy Sack, and Dandy Pop for median drains.	Dandy Products Inc. Dublin, OH Phone: 1-800-591-2284 <a href="http://www.dandyproducts.com">www.dandyproducts.com</a>
Silt Trapper	Storm Water Solutions Lakeville, MN Phone: 1-952-461-4376 <a href="http://www.silttrapper.com">www.silttrapper.com</a>
DIP Basket	Skyview Construction Co., LLC Waubay, SD Phone: 1-605-520-0555 <a href="http://www.skyviewconst.com">www.skyviewconst.com</a>
FLEXSTORM Inlet Filters	Inlet and Pipe Protection, Inc. Naperville, IL Phone: 1-866-287-8655 <a href="http://www.inletfilters.com">www.inletfilters.com</a>

**SEDIMENT CONTROL AT INLETS WITH FRAMES AND GRATES (Cont.)**

GR-8 Guard or Combo Guard	ERTEC Environmental Systems LLC Alameda, CA Phone: 1-866-521-0724 <a href="http://www.ertecsystems.com">www.ertecsystems.com</a>
Sediment Catchers	Shaun Jensen Brookings, SD Phone: 1-605-690-4950
Grate FX, Slammer, or VertiPro	Enviroscape ECM, Ltd. Oakwood, OH Phone: 1-419-594-3210 <a href="http://www.strawblanket.com">www.strawblanket.com</a>
BX Inlet Sediment Boxes	BX Civil and Construction Dell Rapids, SD Phone: 1-605-428-5483 <a href="http://bx-cc.com">bx-cc.com</a>
EZ-Flo and EZ-Catch	Flo-Water, LLC West Des Moines, IA Phone: 1-515-577-6763 <a href="http://www.flo-water.net">www.flo-water.net</a>
Basin Bag	Pro Drain Systems, Inc. Highland, MI Phone: 1-248-329-7001 <a href="http://www.prodrainsystems.com">www.prodrainsystems.com</a>

**TABLE OF SEDIMENT CONTROL AT INLETS WITH FRAMES AND GRATES**

Station	L/R	Quantity (Each)
308+65	R	1

**EROSION CONTROL**

The estimated area requiring erosion control is 1500 square feet. All costs for the erosion control work for furnishing, placing, and maintaining erosion control including equipment, labor, and seeding, will be incidental to the contract lump sum price for EROSION CONTROL.

The limits of erosion control work will be determined by the Engineer during construction.

**MYCORRHIZAL INOCULUM**

Mycorrhizal inoculum will consist of mycorrhizal fungi spores and mycorrhizal fungi-infected root fragments in a solid carrier. The carrier may include organic materials, calcinated clay, or other materials consistent with application and good plant growth. The supplier will provide certification of the fungal species claimed and the live propagule count. The inoculum will include the following fungal species:

- 25% *Glomus intraradices*
- 25% *Glomus aggregatum or deserticola*
- 25% *Glomus mosseae*
- 25% *Glomus etunicatum*

All seed will be inoculated by the seed supplier with a minimum of 20,000 live propagules of mycorrhizal fungi per 1,000 square feet. All costs of inoculating the seed will be incidental to the contract lump sum price for EROSION CONTROL.

The mycorrhizal inoculum will be as shown below or an approved equal:

Product	Manufacturer
MycoApply	Mycorrhizal Applications, Inc. Grants Pass, OR Phone: 1-866-476-7800 <a href="http://www.mycorrhizae.com">www.mycorrhizae.com</a>
AM 120 Multi Species Blend	Reforestation Technologies Int. Gilroy, CA Phone: 1-800-784-4769 <a href="http://www.reforest.com">www.reforest.com</a>

**PERMANENT SEEDING**

The areas to be seeded consist of all newly graded areas within the project limits except for the top of roadways and temporary easements under cultivation.

Lawn and turf seed, such as the Type D Permanent Seed Mixture, will be tested within 12 months prior to planting, exclusive of the calendar month in which the test was completed.

Type D Permanent Seed Mixture will consist of the following:

Grass Species	Variety	Pure Live Seed (PLS) (Pounds/1000 SqFt)
Kentucky Bluegrass	Avalanche, Appalachian, Wildhorse, Blue Bonnet, Action	1.4
Perennial Ryegrass	Turf Type Varieties	1.4
Creeping Red Fescue	Epic, Boreal, Chantilly	1.4
Chewings Fescue	Ambrose, K2, Zodiac, Shadow III	1.4
Alkali Grass	Fults, Fults II, Quill, Salty	1.4
Total:		7



POB Sta. 308+34.82 N: 210107.920 E: 2607337.273  
POE Sta. 308+87.47 N: 210109.702 E: 2607389.893

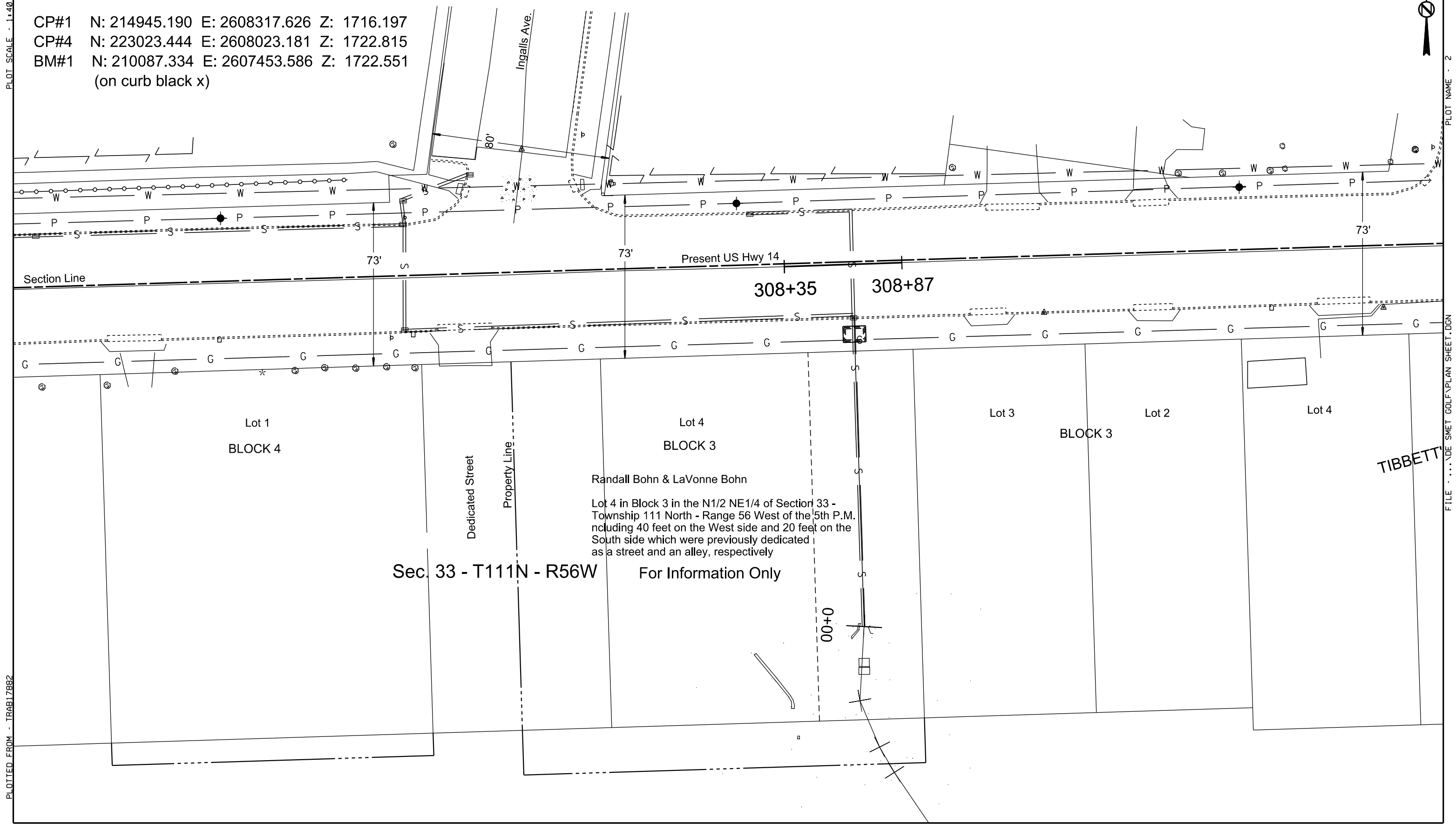
308+65.00 - 31.24' Rt  
Install Special 8'x5' Junction Box

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	014-191	6	12
Plotting Date: 02/20/2019			

CP#1 N: 214945.190 E: 2608317.626 Z: 1716.197  
CP#4 N: 223023.444 E: 2608023.181 Z: 1722.815  
BM#1 N: 210087.334 E: 2607453.586 Z: 1722.551  
(on curb black x)

PLOT SCALE - 1"=40'

PLOT NAME - 2

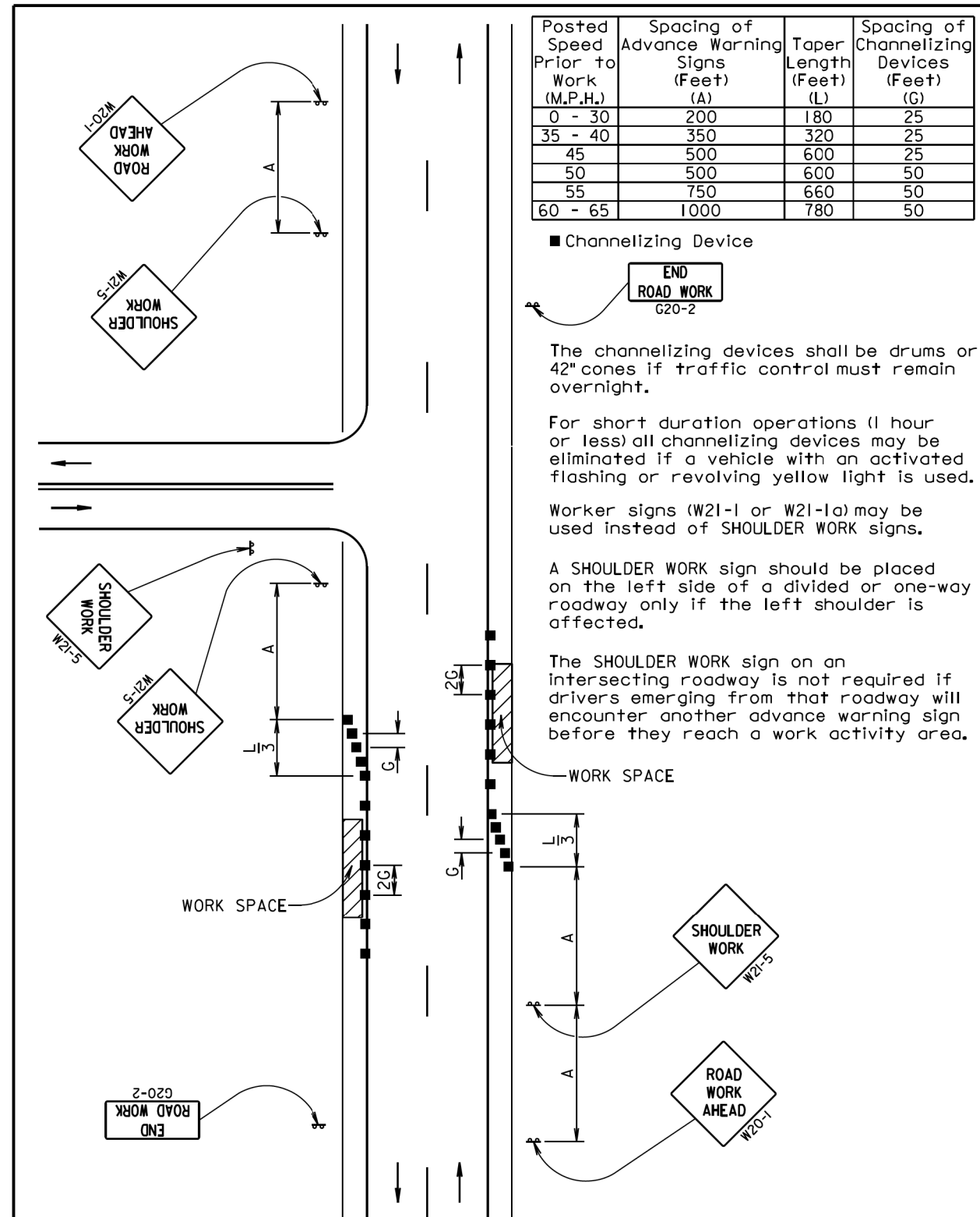


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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	014-191	7	12

Plotting Date: 02/19/2019



June 3, 2016

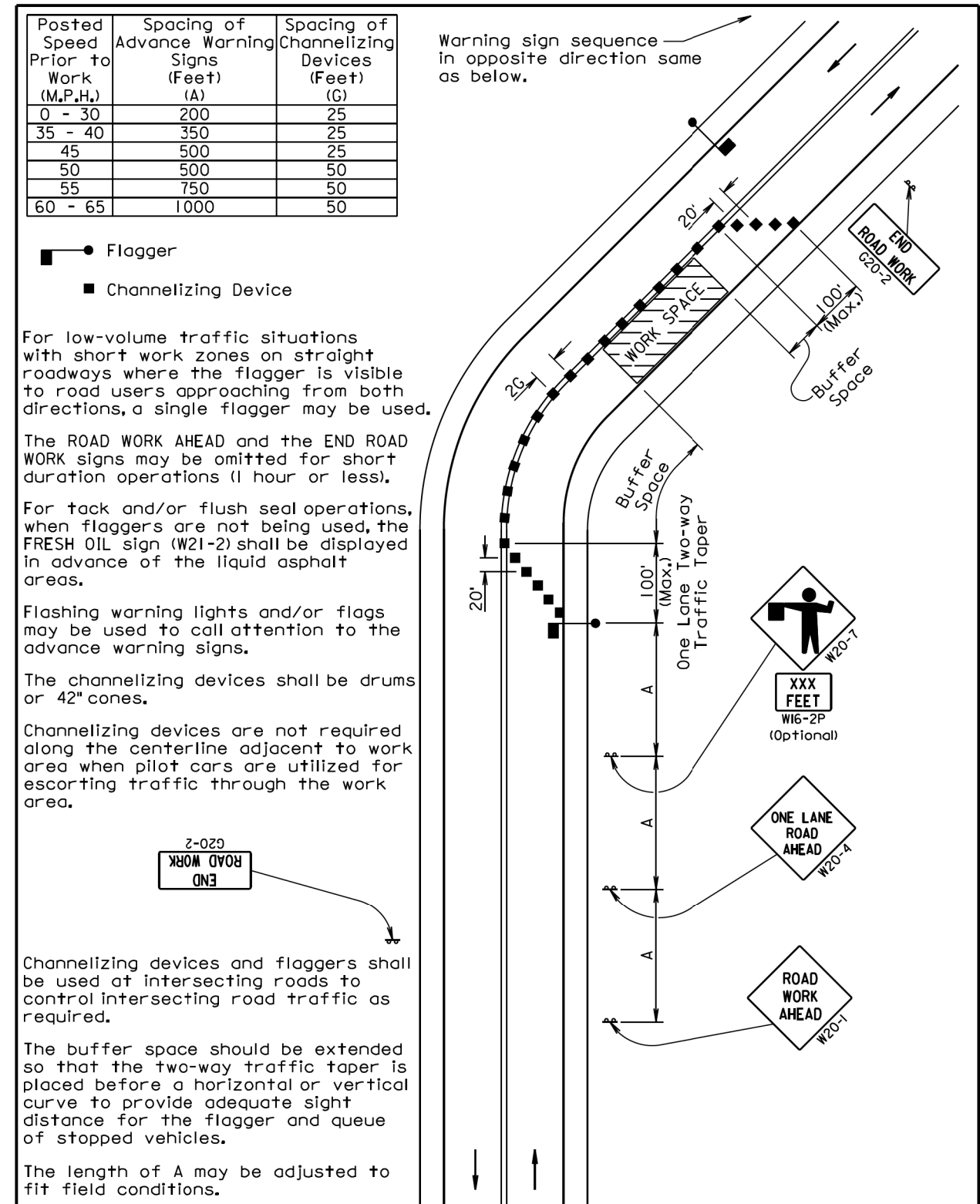
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## GUIDES FOR TRAFFIC CONTROL DEVICES WORK ON SHOULDERS

PLATE NUMBER  
634.03

Sheet 1 of 1



June 3, 2016

**Published Date: 1st Qtr. 2019**

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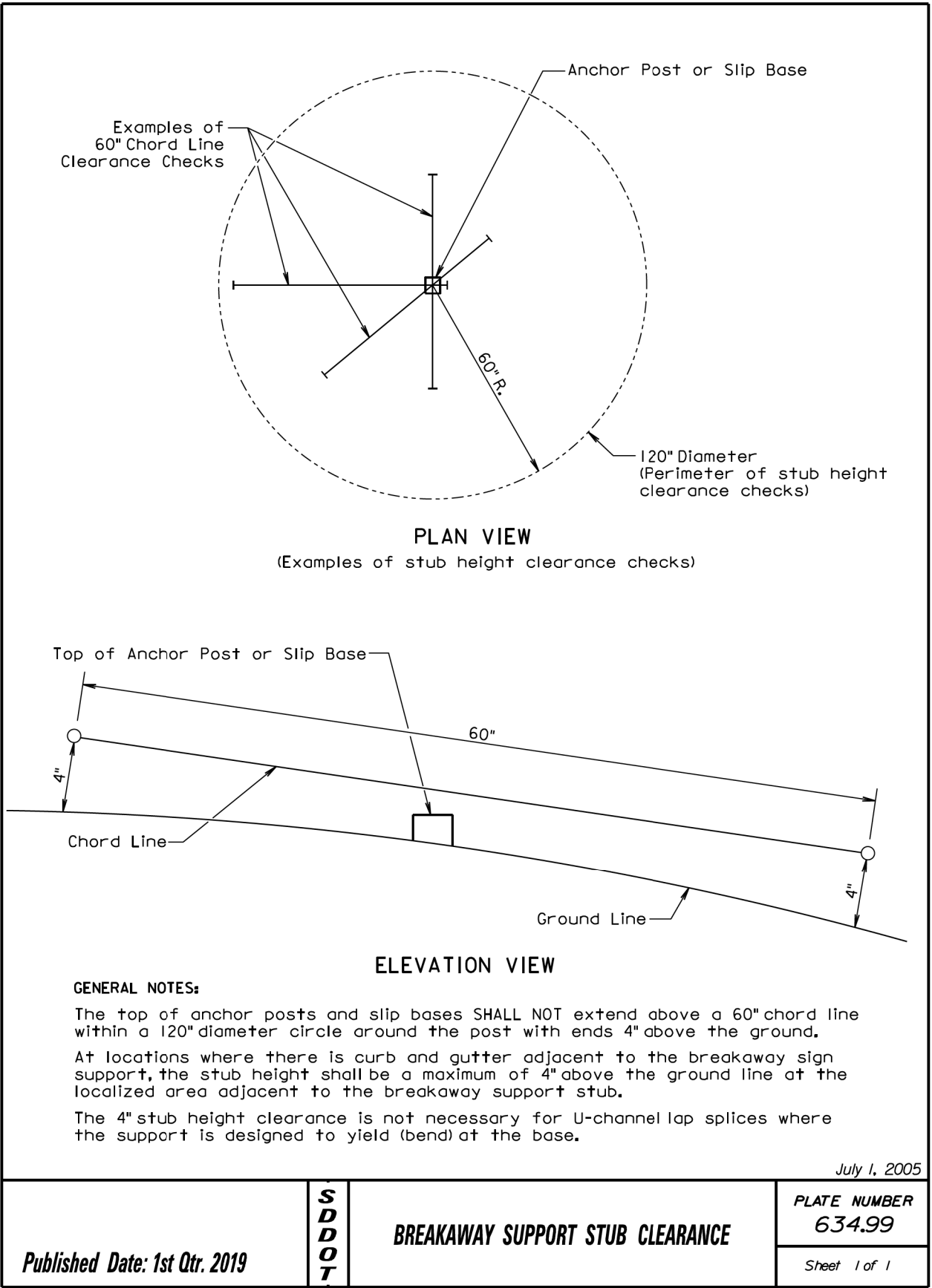
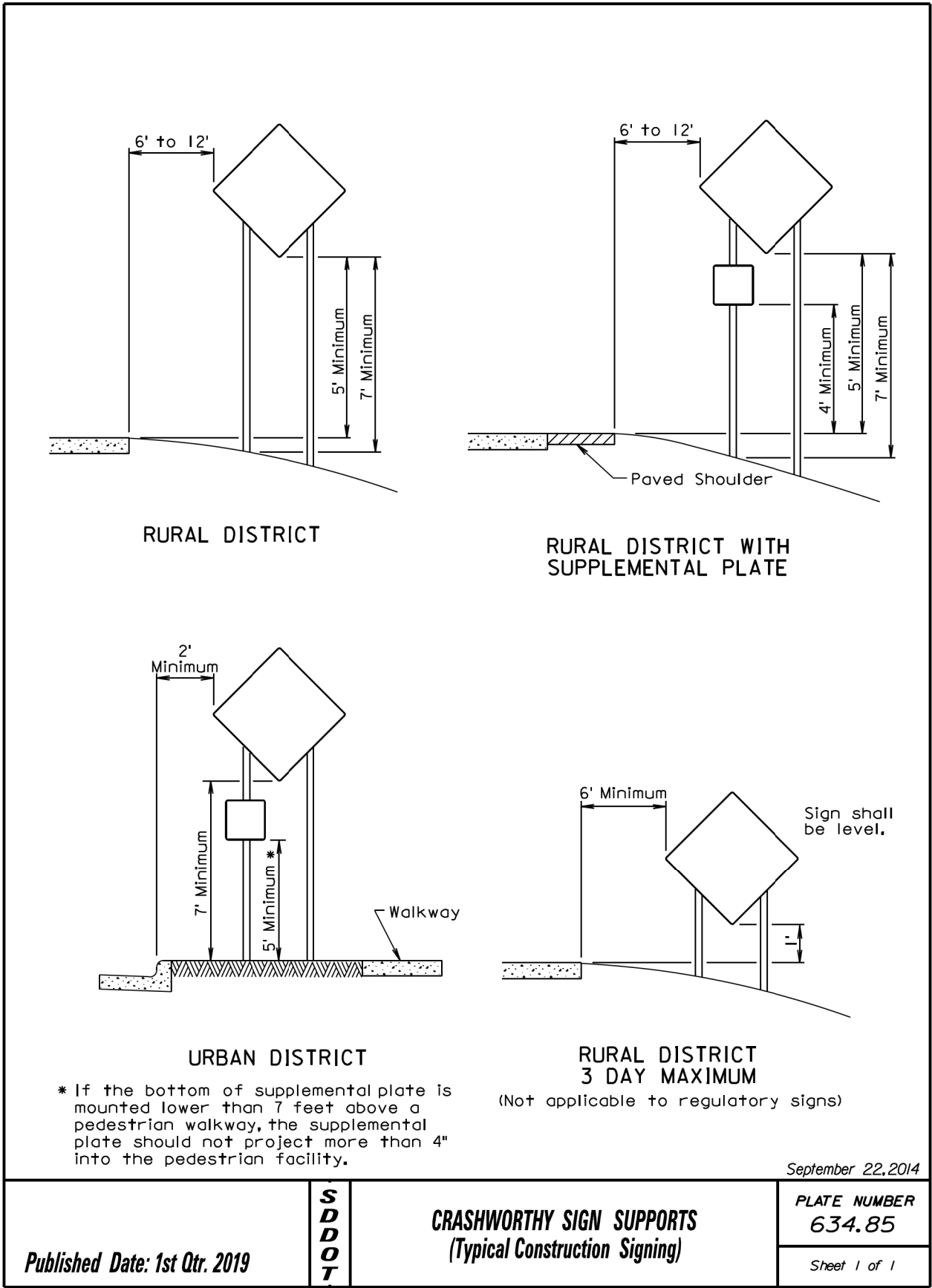
## GUIDES FOR TRAFFIC CONTROL DEVICES LANE CLOSURE WITH FLAGGER PROVIDED

PLATE NUMBER  
634.23

Sheet 1 of 1

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	014-191	8	12

Plotting Date: 02/19/2019





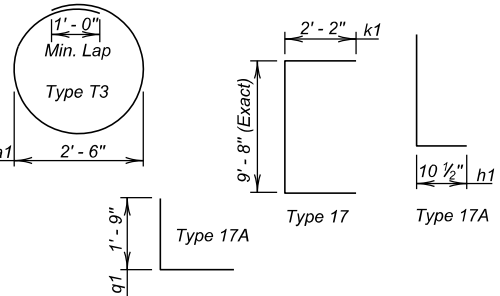
ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W20-1	ROAD WORK AHEAD	2	48" x 48"	16.0	32.0
W20-4	ONE LANE ROAD AHEAD	2	48" x 48"	16.0	32.0
W20-7	FLAGGER (symbol)	2	48" x 48"	16.0	32.0
W21-5	SHOULDER WORK	2	48" x 48"	16.0	32.0
G20-2	END ROAD WORK	2	36" x 18"	4.5	9.0
		CONVENTIONAL ROAD TRAFFIC CONTROL SIGNS SQFT			
		137.0			

STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
S.D.	014-191	10	12

### REINFORCING SCHEDULE

Mk.	No.	Size	Length	Type
a1	1	6	9' - 0"	T3
a2	8	-	-----	-
h1	36	4	10' - 3"	17A
k1	56	4	14' - 0"	17
m1	15	5	6' - 9"	Str.
m2	9	5	9' - 9"	Str.
n1	15	5	5' - 9"	Str.
n2	9	5	8' - 9"	Str.
p1	44	4	5' - 0"	Str.
p2	38	4	8' - 0"	Str.
q1	20	4	3' - 6"	17A



NOTES:  
All dimensions are out to out of bars.  
Ø Locate in center of top slab with 3" clearance at the manhole opening.  
▼ Cast Iron Manhole Steps (R-1980-C) from Neenah Foundry or equivalent.

### ESTIMATED QUANTITIES

ITEM	UNIT	QUANTITY
Class M6 Concrete	Cu. Yd.	7.6
Reinforcing Steel	Lb.	1550
Type A7 Manhole Frame and Lid	Each	1

### SPECIFICATIONS

- Design Specifications: AASHTO LRFD Bridge Design Specifications, 2017
- Construction Specifications: South Dakota Standard Specifications for Roads and Bridges, 2015 Edition and required Provisions, Supplemental Specifications, and Special Provisions as included in the Proposal.

### GENERAL NOTES

- Design Live Load: HL-93. No construction loading in excess of legal load was considered.
- The design of the Junction Box is based on 0 to 1 feet of fill.
- All concrete shall be Class M6 conforming to Section 462.
- Reinforcing steel shall conform to ASTM A615 Grade 60. Cut and bend reinforcing steel as required to place pipe(s) through junction box wall.
- Junction Box may be precast. If precast, submit a checked design (done by a South Dakota registered P.E.) and shop plans to the Office of Bridge Design for approval.
- Use 1 inch clear cover on all reinforcing steel unless otherwise noted.
- All exposed edges shall be chamfered 3/4 inch.
- The cost of furnishing and installing the manhole steps shall be incidental to the contract unit price per Lb. for "Reinforcing Steel."

### LEGEND FOR PLACING RE-STEEL

T.T.S. - Top of Top Slab
B.T.S. - Bottom of Top Slab
T.B.S. - Top of Bottom Slab
B.B.S. - Bottom of Bottom Slab
O.F.W. - Outside Face of Wall
I.F.W. - Inside Face of Wall

### DETAILS

FOR

### SPECIAL 8' X 5' JUNCTION BOX

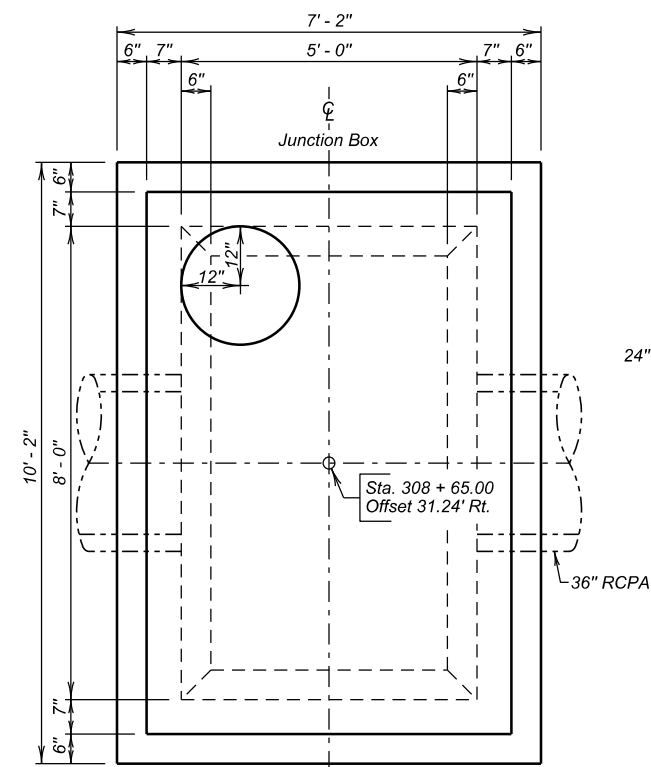
STA. 308 + 65.00 - 31.24 Rt. SEC. 33-T111N-R56W  
PCN I52F 014-191

KINGSBURY COUNTY  
S. D. DEPT. OF TRANSPORTATION  
AUGUST 2018

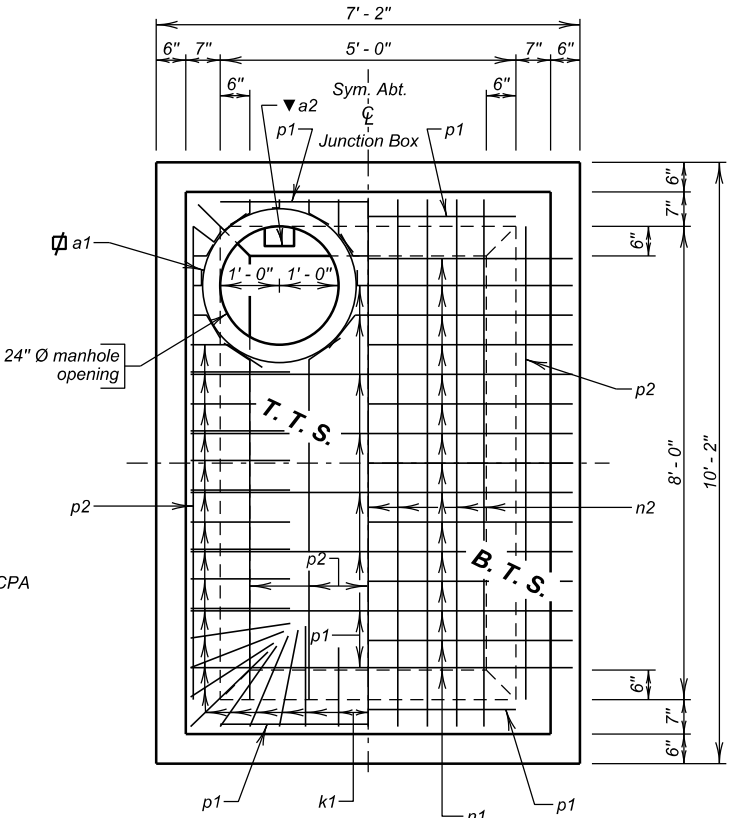
1 OF 2

DESIGNED BY BB KINGI52F	CK. DES. BY AMG I52FVMA01	DRAFTED BY SSVM	Steve A. Johnson BRIDGE ENGINEER
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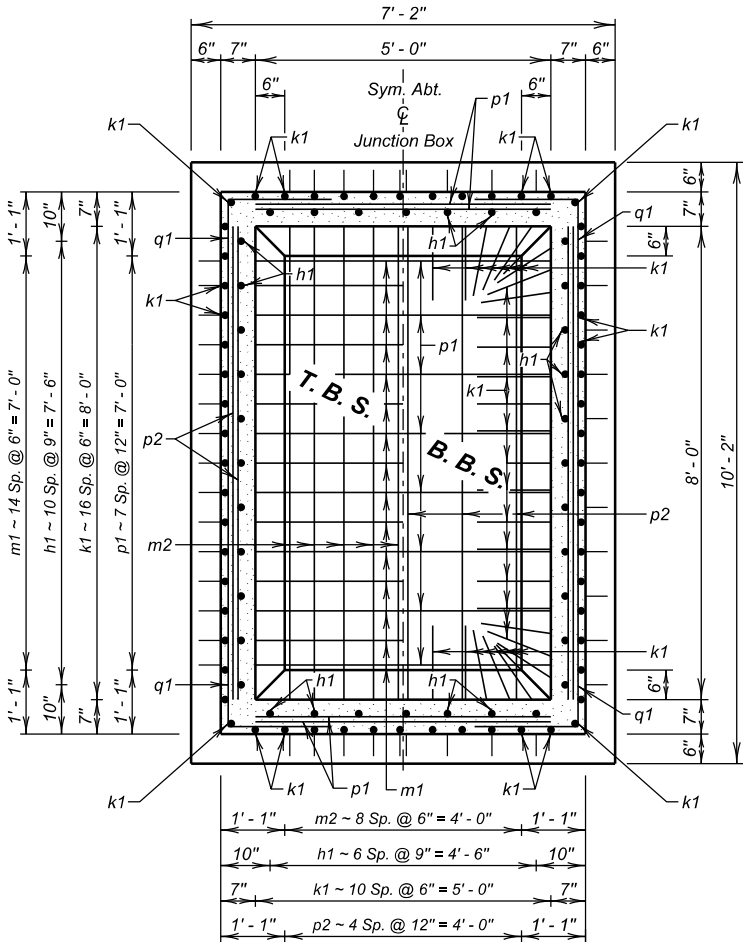
PLANS BY:  
OFFICE OF BRIDGE DESIGN, SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION



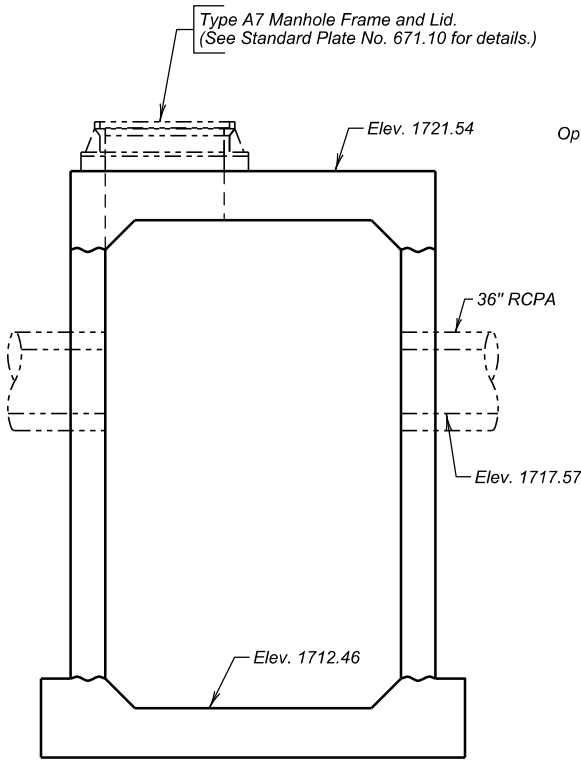
PLAN



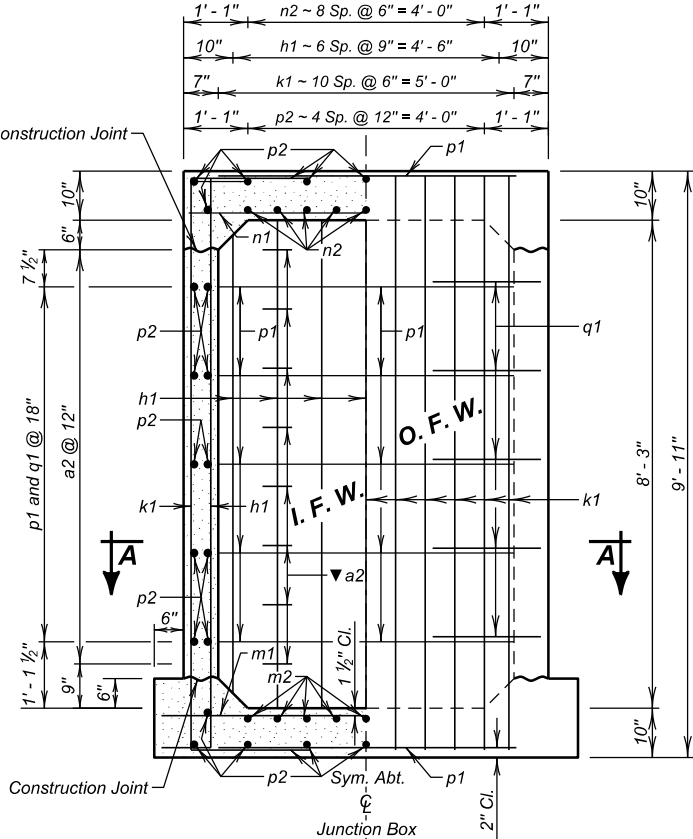
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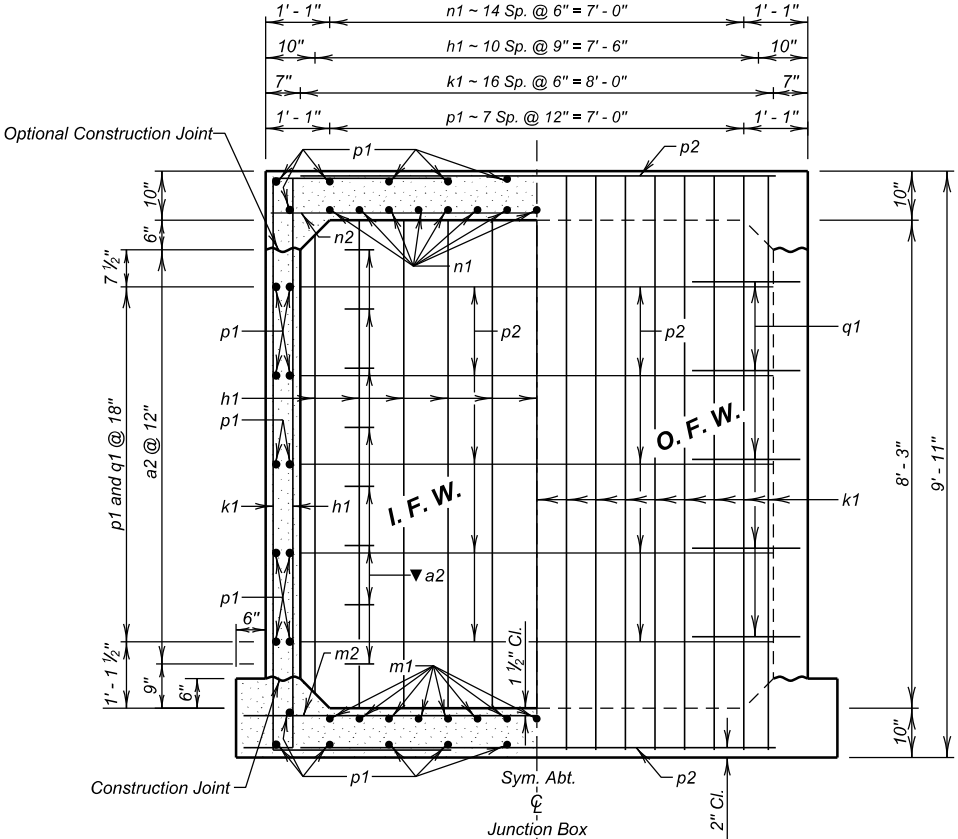
SEC. A - A



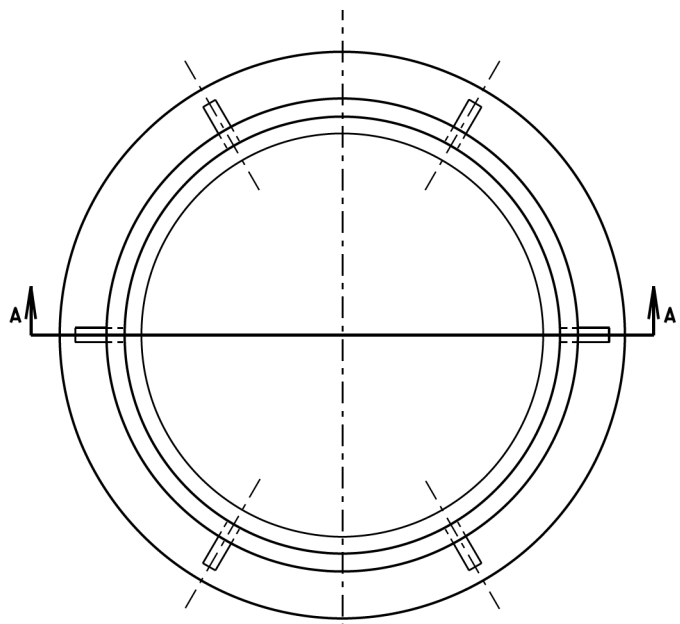
ELEVATION



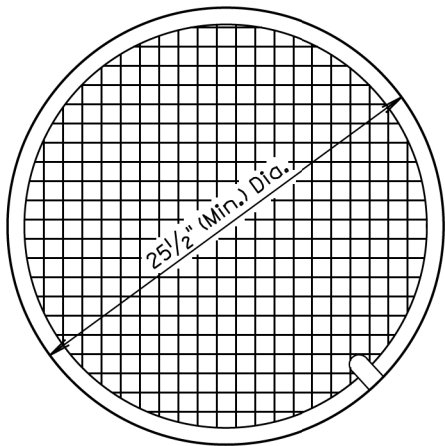
ELEVATION



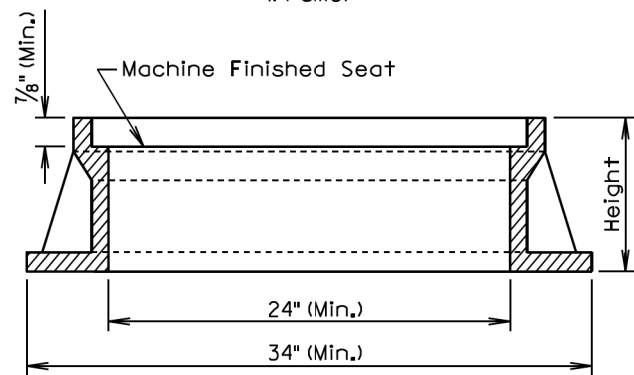
ELEVATION



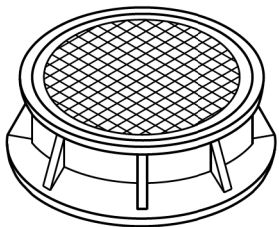
PLAN VIEW  
(Frame)



PLAN VIEW  
(Lid)



SECTION A-A



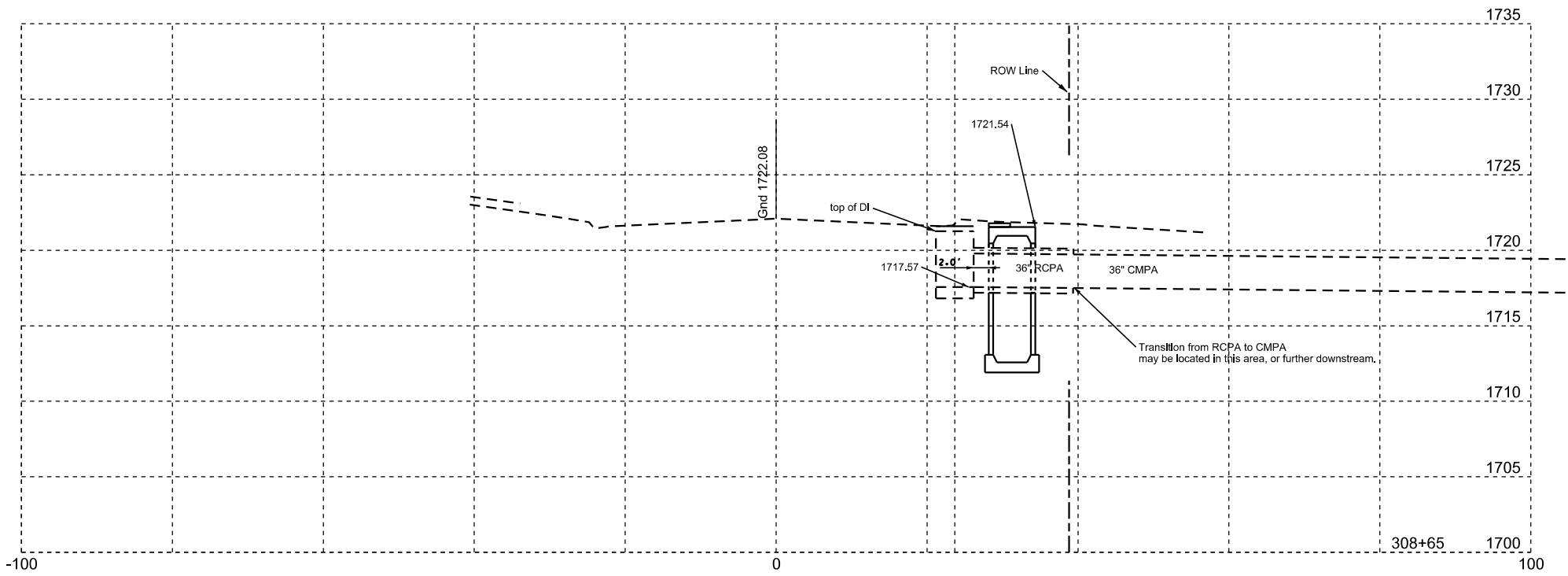
ISOMETRIC VIEW

TYPE	HEIGHT (Inches)	MINIMUM WEIGHT (Lb.)
A7	7	400
A8	8	440
A9	9	470
A10	10	480

GENERAL NOTE:  
Geometric pattern on top of lid other than  
that shown shall be approved by the Engineer.

June 26, 2016

Published Date: 3rd Qtr. 2018	S D D O T	TYPE A MANHOLE FRAME AND LID	PLATE NUMBER 671.10
			Sheet 1 of 1



Plotting Date: 02/19/2019

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	014-191	12	12